

50B5

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BEAM POWER AMPLIFIER

MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage	50	ac or dc volts
Current	0.15	amp.

Direct Interelectrode Capacitances (Approx.):°

Grid-No.1 to Plate	0.5	μμf
Input	13	μμf
Output	6.5	μμf

Mechanical:

Mounting Position	Any
Maximum Overall Length	2-5/8"
Maximum Seated Length	2-3/8"
Length from Base Seat to Bulb Top (excluding tip)	2" ± 3/32"
Maximum Diameter	3/4"
Bulb	T-5-1/2
Base	Miniature Button 7-Pin
Basing Designation for BOTTOM VIEW	7BZ

Pin 1 - Grid No.1	Pin 4 - Heater
Pin 2 - Cathode, Grid No.3	Pin 5 - Plate
Pin 3 - Heater	Pin 6 - Grid No.2
	Pin 7 - Grid No.1

CLASS A_1 AMPLIFIER

Maximum Ratings, ***Design-Center Values:***

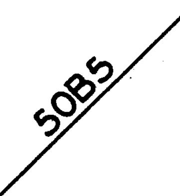
PLATE VOLTAGE	117 max.	volts
GRID-No.2 (SCREEN) VOLTAGE	117 max.	volts
PLATE DISSIPATION	5.5 max.	watts
GRID-No.2 DISSIPATION	1.25 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	90 max.	volts
Heater positive with respect to cathode	90 max.	volts

Typical Operation and Characteristics:

Plate Voltage	110	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 Voltage	-7.5	volts
Peak A-F Grid-No.1 Voltage	7.5	volts
Zero-Signal Plate Current	49	ma.
Max.-Signal Plate Current	50	ma.

°With no external shield.

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Zero-Signal Grid-No.2 Current (Approx.) . .	4	. . . ma.
Max.-Signal Grid-No.2 Current (Approx.) . .	8.5	. . . ma.
Plate Resistance (Approx.)	14000	. . ohms
Transconductance	7500	. . μmhos
Load Resistance.	2500	. . ohms
Total Harmonic Distortion.	9	. . . %
Max.-Sig. Power Output	1.9	. . watts

Maximum Circuit Values (for maximum rated conditions):

Grid-No.1-Circuit Res. . . .	fixed bias .	0.1	. megohm
	cathode bias .	0.5	. megohm

JAN. 2, 1946 TENTATIVE DATA

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AVERAGE PLATE CHARACTERISTICS
PENTODE CONNECTION

E_f = 50 VOLTS GRID-№ 2 VOLTS = 110

GRID-№ 2 MILLIAMPERES (I_{C2})

30 25 20 15 10 5 0

GRID-№ 1 VOLTS E_{C1} = 0, -2, -4, -6, -8, -10, -12, -14

E_{C1} = 0

I_b I_b I_{C2}

PLATE VOLTS

0 50 100 150 200 250

PLATE MILLIAMPERES (I_b)

200 175 150 125 100 75 50 25 0

OCT. 8, 1945 RCA VICTOR DIVISION 92CM-6603

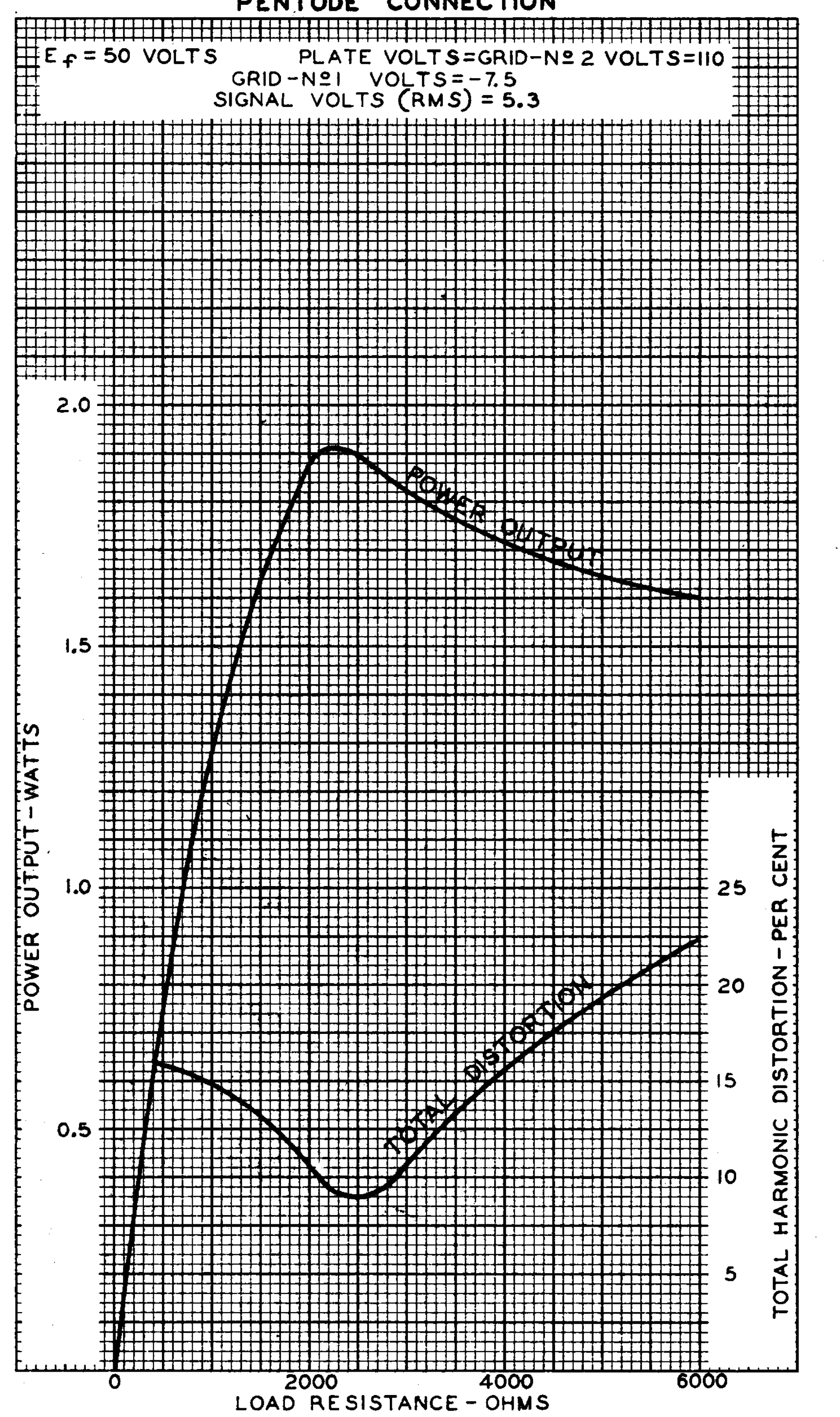
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OPERATION CHARACTERISTICS
PENTODE CONNECTION



OCT. 24, 1945

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92CM-6612